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## Germany

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### Green Movement to End Soybean Imports – An Analysis

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Oilseeds and Products

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**Report Highlights:**

In recent years, the German Green party has promoted policies designed to replace imported soybeans with domestically produced protein crops. Recognizing that an important political party is openly advocating an end to soybean imports - the largest U.S. agricultural export to Germany - we are providing updated analysis on the feasibility of this policy approach. We conclude that while it would be impracticable for Germany to produce enough plant protein to meet domestic demand, the campaign against soybeans may broaden existing user boycotts and related NGO activities. U.S. soybean and soybean meal exports to Germany are valued at well over \$500 million.

## The Green Party

In the 2009 federal elections, the Green Party (in German, 'Bündnis 90/Die Grünen') won nearly 11% of the vote in the German Parliament (Bundestag). The German Green party is affiliated with the European Green Party, which has representatives in the European Parliament.

### Green Representation in German & EU Parliaments

| Bundestag     |           | European Parliament |           |
|---------------|-----------|---------------------|-----------|
| Election year | % of vote | Election year       | % of vote |
| 1980          | 1.5%      | 1979                | 3.2%      |
| 1983          | 5.6%      | 1984                | 8.2%      |
| 1987          | 8.3%      | 1989                | 8.4%      |
| 1990          | 5.0%      | 1994                | 10.1%     |
| 1994          | 7.3%      | 1999                | 6.4%      |
| 1998          | 6.7%      | 2004                | 11.9%     |
| 2002          | 8.6%      | 2009                | 12.1%     |
| 2005          | 8.1%      |                     |           |
| 2009          | 10.7%     |                     |           |

The German Greens are currently polling about 14-16%, down from the low 20s in the immediate aftermath of the Fukushima disaster. The Greens are not part of the current governing coalition but are cited by the larger Social Democrats (SPD) as their coalition partner of choice. The Greens were in coalition with the SPD from 1998 to 2005. The Greens are represented in all 16 of Germany's powerful state governments (Laender) and, for the first time, they are the lead coalition partner in a state government (Baden-Wuerttemberg). Three Laender have Green ministers of agriculture. The Greens are facing pressure from the new Pirate Party (which favors expanded internet freedom) and they lost support to them in last September's Berlin state election. The next federal elections are scheduled for September 2013.

## Protein Self Sufficiency

In September 2011 and in October 2010, the German Green Party organized public meetings at the Bundestag to discuss Europe's feed protein imports. The September 2011 meeting featured a 62 pg German language publication titled, '[Biodiversity Instead of Soya Madness](#).' This report was published with the support of Martin Haeusling, a member of Green Party (Gruene/EFA) in the European Parliament and member of the Committee on Agriculture and Rural Development (AGRI). The October 2010 meeting was titled, 'Protein Strategy for Agriculture – Improving Self Sufficiency in Protein Feed.' These events served both as a venue for the Green Party to get public input on the topic but also as a vehicle to spread the Green point of view about the structure of the EU's Common Agricultural Policy (CAP) post 2013.

Speakers representing both the German and European Parliament Green parties linked wide ranging

environmental and social problems to the production of soybeans. Deforestation, the use of biotech crop varieties (GMOs) and exploitation of small farmers by large multinational corporations were raised. Because of the broad nature of these issues, little distinction was made regarding the origin of soybeans (i.e., Brazil versus the United States).

Both events highlighted the goal of ending German and EU vegetable protein for animal feed imports. Speakers claimed that Germany, a major user of soybeans, is complicit and therefore needs to pursue policies that end soybean imports. These include substituting imports with domestic protein feed production and decreasing animal livestock production and meat consumption. They also believe that 'food sovereignty' should receive more of a policy emphasis. In October 2010, a German Green Member of European Parliament gave a representative speech that may be summarized as:

- Eighty percent of the protein required for EU animal production has to be imported. 'This is land grabbing with knives and forks.'
- European soybean imports should be replaced with domestic protein products.
- The zero tolerance policy for unapproved GMO-events (biotech crops) must be maintained.
- Those who use or trade biotech products need to pay for the costs for maintaining separate commodity trade channels.
- Imported biotech soybeans should be taxed (despite a GATT/WTO zero duty commitment) to give domestic protein crop production a competitive advantage. (Comment: the Blair-House Agreement, limiting CAP support for oilseed production, is also cited as a historic cause of EU protein import dependency.)
- To be more sustainable, intensive animal production should be limited. (The specific policy goal given was a per hectare limit of one dairy cow, 8.33 hogs, 100 broilers or 320 laying hens.)
- Research and support for legume production and mixed crops systems should be increased.

According to another Green party speaker, demand for animal feed results in environmental problems in soybean producing countries, such as the conversion of bio-diverse rainforests into, 'pesticide contaminated monocultures.' There was also opposition to Germany becoming a net meat exporter and concern was voiced over the level of German meat consumption.

These events also included technical presentations on the production of indigenous protein plants as well as presentations showing how German protein feed self sufficiency could be increased. Pulses, including faba beans, field peas and sweet lupins were singled out as having production potential. Soybeans could in theory be grown in some areas in Germany but localized varieties would need to be developed.

### **The Math of Protein Self Sufficiency – Replacing Soybeans Unrealistic**

Despite a professional and well organized anti-soybean campaign, the Greens face a number of economic and agronomic challenges to establishing large-scale plant protein production in Germany. These include the variability of pulse crop yields, the exclusion of biotech crops, a lack of soybean varieties developed for the

German climate, and strong economic competition for land from other profitable crops, such as wheat. Replacing soybean meal totally with mid-protein (e.g. rapeseed meal) and low-protein feeds (e.g. pulses) would result in a drop in animal producer profitability. Perhaps the most important obstacle, however, is the scale of production needed to meet protein feed demand in Germany. Reaching anything near self-sufficiency would require radical changes in policy, major disruptions to established cropping practices, and shortages of displaced crops.

The German livestock sector consumes on average about 4.5 million metric tons (MMT) per year of soybean meal for animal feed. This translates roughly into 2 MMT of protein. In order to replace this amount of protein with pulses, Germany would have to grow 7.9 MMT of faba beans or 8.4 MMT of field peas or 5.8 MMT of sweet lupines. Assuming 6 year average yields (2005-2010) this would require an area of 2.5, 2.7, and 4.3 million hectares, respectively. In Germany, 11.9 million ha are currently used for arable crop production. If only one of the three crops in question were to fill the gap, it would require 19, 23, or 37 percent of Germany's available arable land. In contrast, pulses currently make up less than one percent of arable land use in Germany.

#### **An Unrealistic Scenario - Area and Production Needed to Replace Imported Protein Feed**

|   | Faba beans | Field peas | Sweet lupins | Unit of Measure |
|---|------------|------------|--------------|-----------------|
| Protein content                                     | 261.2      | 245.5      | 361.7        | Kg per MT       |
| Average yield in Germany (2005-2010)                | 3.49       | 3.05       | 1.3          | MT per hectare  |
| 2010 area   | 57.23      | 16.29      | 24.01        | 1000 hectares   |
| Current percentage of arable land                   | 0.5%       | 0.1%       | 0.2%         |                 |
| Required production to replace 4.5 MMT soybean meal | 7,858,203  | 8,360,743  | 5,674,765    | MT              |
| Required area                                       | 2,252      | 2,741      | 4,365        | 1000 hectares   |
| percentage German arable land required              | 19%        | 23%        | 37%          |                 |

Note: Protein content as listed in the USDA National Nutrient Database, <http://www.nal.usda.gov/fnic/foodcomp/search/>

In addition, due to disease pressure, pulses typically have a wide crop rotation cycle. A typical 5 year crop rotation for pulses translates into a theoretical 20 percent maximum acreage ceiling. However, not all land is equally suitable for pulses or would be able to support an average yields (i.e., pulses are already being produced on the most suitable land). Therefore, realistically, the maximum ceiling would be somewhat less than 20 percent of arable land even with the extreme policy incentives needed to shift Germany's farming sector toward pulse production.

### The Example of France – Many Factors At Play

In the 1980s, France tried to reduce its dependence on imported soybeans by encouraging farmers to grow protein crops. Pulse area in France increased from 100,000 hectares in 1980 and peaked in 1993 with 750,000 hectares and a total production of 3.85 million MT. France imported 870,000 MT of soybeans in 1980, dropping to 520,000 MT by 1993. However, this picture is more complex than these numbers suggest. An unrelated increase in the demand for rapeseed from the emerging biodiesel industry had a major influence on protein feed use. Demand for rapeseed oil grew and this resulted in increased production and feed consumption of the by-product rapeseed meal. Also during this period, soybean meal used in animal feed was increasingly imported directly into France, which also contributed to a reduction in raw soybean imports. Finally, France at times exported up to one third of its pulse production, in a sense decreasing self sufficiency.

Pulse production in France decreased after 1993 and by 2009, pulses were grown on just 220,000 hectares and production was 1.02 million MT. The French biodiesel industry has continued to expand since then, resulting in increasing rapeseed meal production which has partially replaced soybean meal in animal feed rations. In 2009, France used more than 4 million MT soybean meal, 2.2 million MT rapeseed meal, and only 300,000 MT of pulses.

### Voluntary Programs Against Biotech Soybeans

As mentioned, Green arguments against imported soybeans are wide ranging and cover broad environmental and social issues. One area of opposition is the near global use of biotech soybean varieties. While this technology is seen as environmentally and commercially beneficial in producing countries, the technology has been long opposed in Germany.

One way opposition to imported soybeans is manifesting itself is through animal producers switching away from biotech soybeans as a feed. This movement is being supported by the German government through a non-biotech labeling program. Germany applies EU regulations for labeling biotech foods, which require labels only if biotech crops are used as an ingredient. There is no required labeling for meat or dairy products come from animals fed with biotech feeds.

In 2008, the German government legislated a voluntary “gene technology-free” labeling program. In August 2009, the Ministry for Food, Agriculture and Consumer Protection introduced a standard to help consumers better identify products and to standardize the information consumers receive. The program has the effect of



that

label

discouraging the use of biotech feeds in animal production. Food manufacturers can use a government-sanctioned label on their products if they comply with strict requirements. The administration of this program is largely entrusted to the “Verband Lebensmittel ohne Gentechnik e.V.” (non-Biotech Foods Association). As of November 2011, the Association claims that 100 companies are using the label. Eggs and cheese are the most popular products sold under this labeling scheme.

A few private producers are also avoiding biotech soybeans, although it is not clear how widespread this practice is. One example of the use of non-biotech labeling as a marketing tool is “Landliebe” (Landlove), a popular German brand of dairy products sold by Campina GmbH, a subsidiary of the large Dutch dairy cooperative Campina. Campina became the target of public criticism in Germany for sourcing milk from farmers using biotech feeds, such as soybeans. In October 2008, Campina reacted by only buying milk from farmers who agree not to use biotech animal feeds when producing for the Landliebe brand. Campina now makes biotech-free claims for Landliebe milk, cream, butter and yoghurt using its own biotech-free label. However, not all dairy products sold by Campina make biotech-free claims.



There are also several non-governmental organizations in Germany working to end or reduce soybean imports. As one example, the organization ‘Agrar Koordination’ distributes a pamphlet titled, ‘The Feed Blues’ and it runs a signature campaign to end soybean imports. This organization receives support from several sources, including from the German government’s Federal Ministry for Economic Cooperation and Development.

*NGO Anti Soybean Pamphlet  
(Translation: Environmental  
Contamination – **No!** To Imports  
of (GMO) Soy)*

## Trade & Use Data

The U.S. share of domestic German soybean meal consumption is estimated to be about 1 million metric tons, or little less than 25% of total German use. Some of this trade is indirect. For example, U.S. soybeans exported to the Netherlands are processed and the resulting soybean meal may be exported to Germany as a 'Dutch' product. The data below give an indication of German use and trade in soybeans and soybean meal.

| <b>Germany</b><br><b>Production, Supply &amp; Demand Estimates</b><br><b>Soybean Meal</b> |              |              |              |
|---|--------------|--------------|--------------|
| Metric Tons ('000)  |              |              |              |
| Marketing Year  | 2008/2009    | 2009/2010    | 2010/2011    |
| Crush   | 2,900        | 2,938        | 2,900        |
| Beginning Stocks  | 342          | 397          | 651          |
| Production  | 2,290        | 2,330        | 2,250        |
| <b>MY Imports</b>   | <b>3,540</b> | <b>3,455</b> | <b>3,500</b> |
| Total Supply  | 6,164        | 6,182        | 6,401        |
| MY Exports  | 1,301        | 1,390        | 1,265        |
| Feed Waste Dom. Cons.   | 4,474        | 4,141        | 4,636        |
| Total Dom. Cons.  | 4,474        | 4,141        | 4,636        |
| Ending Stocks   | 397          | 651          | 500          |
| Total Distribution  | 6,172        | 6,182        | 6,401        |
| Source: FAS Berlin  |              |              |              |

| <b>U.S. Exports of Soybeans and Soybean Meal To Germany</b><br><b>Quantity</b> |           |           |           |
|--|-----------|-----------|-----------|
| Marketing Year   | 2008/2009 | 2009/2010 | 2010/2011 |
| Product  | Qty       | Qty       | Qty       |
|  | MT        | MT        | MT        |
| Soybeans   | 1,622,380 | 1,408,869 | 1,228,520 |
| Soybean Cake & Meal  | 51,953    | 9,337     | 79,544    |
| Total  | 1,674,333 | 1,418,206 | 1,308,064 |
| Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics   |           |           |           |

| <b>U.S. Exports of Soybeans and Soybean Meal To Germany</b><br><b>Value</b> |
|---|
|---|

| Marketing Year  | 2008/2009  | 2009/2010  | 2010/2011  |
|---|------------|------------|------------|
| Product   | Value      | Value      | Value      |
|   | \$ ('000)  | \$ ('000)  | \$ ('000)  |
| Soybeans  | \$ 736,165 | \$ 518,891 | \$ 487,643 |
| Soybean Cake & Meal   | \$ 18,457  | \$ 3,757   | \$ 28,764  |
| Total   | \$ 754,622 | \$ 522,648 | \$ 516,407 |
| <i>Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics</i> |            |            |            |

| German Imports<br>Soybeans       |                 |      |           |           |           |                 |
|----------------------------------|-----------------|------|-----------|-----------|-----------|-----------------|
| Calendar Year: 2008 – 2010       |                 |      |           |           |           |                 |
|                                  | Partner Country | Unit | Quantity  |           |           | 2010 Percentage |
|                                  |                 |      | 2,008     | 2,009     | 2,010     |                 |
| 1                                | Netherlands     | MT   | 953,103   | 997,745   | 1,017,269 | 29.8            |
| 2                                | Brazil          | MT   | 888,290   | 1,533,256 | 715,401   | 20.9            |
| 3                                | Canada          | MT   | 96,863    | 1,017     | 568,106   | 16.6            |
| 4                                | United States   | MT   | 1,266,242 | 662,249   | 431,635   | 12.6            |
| 5                                | Paraguay        | MT   | 120,753   | 33,230    | 384,024   | 11.2            |
| 6                                | Uruguay         | MT   | 133,308   | 10,435    | 243,310   | 7.1             |
| 7                                | Italy           | MT   | 14,411    | 15,179    | 18,477    | 0.5             |
| 8                                | Belgium         | MT   | 10,269    | 17,796    | 15,702    | 0.5             |
| 9                                | Austria         | MT   | 7,178     | 8,641     | 10,154    | 0.3             |
| 10                               | Denmark         | MT   | 8,789     | 3,640     | 5,088     | 0.15            |
|                                  | Other           | MT   | 8,560     | 12806     | 7829      | 0.4             |
| <i>Source: World Trade Atlas</i> |                 |      |           |           |           |                 |

| German Imports<br>Soybean Meal, |                 |      |           |           |           |                 |
|---------------------------------|-----------------|------|-----------|-----------|-----------|-----------------|
| Calendar Year: 2008 – 2010      |                 |      |           |           |           |                 |
|                                 | Partner Country | Unit | Quantity  |           |           | Percentage 2010 |
|                                 |                 |      | 2008      | 2009      | 2010      |                 |
| 1                               | Netherlands     | MT   | 1,819,288 | 1,847,808 | 1,839,996 | 52.4            |
| 2                               | Brazil          | MT   | 1,285,398 | 1,159,813 | 1,169,704 | 33.3            |
| 3                               | Argentina       | MT   | 287,897   | 339,013   | 360,903   | 10.3            |
| 4                               | United States   | MT   | 22,262    | 4,809     | 63,389    | 1.8             |
| 5                               | Austria         | MT   | 36,774    | 7,548     | 22,892    | 0.7             |
| 6                               | Belgium         | MT   | 60,672    | 56,262    | 21,381    | 0.6             |
| 7                               | Denmark         | MT   | 29,226    | 26,164    | 19,369    | 0.6             |
| 8                               | Italy           | MT   | 3,203     | 4,422     | 7,139     | 0.2             |





